EVO 35, 50, 70 & 100
PRODUCT MANUAL

Issue 2- 12/01/2006

CONTENTS PAGE

1. Introduction....2
2. Specification....2
3. User Instructions....3
   3.1 Operation....3
   3.2 Cleaning Routine....3
4. Installation....4
5. Maintenance....4
6. Component Replacement....5
   6.1 Fan Motor....5
   6.2 Recirculation Pump....6
   6.3 Ice Bank Thermostat....7
7. EVO Spares List....8
8. EVO Range Exploded View....9
9. Fault Finding....10
10. Wiring Diagram....11

1. INTRODUCTION

The EVO is a range of upright beer coolers designed to be sited either remote or under the counter. A recirculation pump provides both constant agitation of the water bath and a flow of chilled water around the python. The recirculated water keeps the beer in the python cold.

The EVO range has been designed with simplicity and reliability in mind.

A Product Data Sheet is available detailing the technical specification and the range of EVO models.

2. SPECIFICATION

For a full and detailed specification refer to the Product Data Sheet.

DIMENSIONS	**EVO -**	**35**	**50**	**70**	**100**
Width:		350mm	350mm	425mm	425mm
Depth:		350mm	350mm	425mm	425mm
Height:		630mm	630mm	660mm	740mm
Weight:		23Kg	27Kg	31Kg	36Kg
Packed Weight:		25Kg	29Kg	33.5Kg	38.5Kg
Ice Bank weight:		6.6Kg	8.9Kg	13.0Kg	20.0Kg
Max Ambient Temp:		32°C	32°C	32°C	32°C

3. USER INSTRUCTIONS

3.1 OPERATION OF THE COOLER

To maintain the safe operation and reliability of the EVO cooler during normal use, please observe the following points:-

The cooler is designed to run continuously. During normal use it should only be switched off when cooling is not required for a period of more than 24 hours. The EVO cooler should be re-started at least 8 hours (dependant on model) before it is to be used.

Do not spill or let liquids drip onto the EVO cooler – if liquids do spill onto the unit, electrically isolate before wiping the spillages up.

Do not place items close to the EVO cooler as this can reduce the air flow and reliability.

Do not place items on top of the EVO cooler as this may cause damage to the recirculating pump.

Do not move the EVO cooler once full of water.

Do not block the water tank overflow – any condensation generated by the EVO cooler must be allowed to run away.

Note: In the event of malfunction switch off and electrically unplug the EVO cooler. Always use a qualified Service Engineer to repair the unit – there are no user serviceable components.

3.2 CLEANING ROUTINE

Beer coils can be internally cleaned as part of the regular draught beer system cleaning as follows:-

1. Purge the beer lines with clean, cool water.
2. Add chlorinated alkaline solution, diluted with correct amount of water, to the system.
3. Allow to stand in the pipes for the time specified by the cleaning solution manufacturer – usually 30 minutes.
4. Flush the system with clean, cool water to remove all traces of the cleaning solution.
5. Refill the system with beer.

The outside of the cooler can be cleaned using a mild non-foaming aerosol cleaner sprayed onto a cloth and wiped over the surface of the EVO cooler. Electrically unplug the EVO cooler whilst cleaning.

Check that the airflow to the EVO cooler is un-impeded and clean the condenser fins. To clean the fins – electrically isolate the EVO cooler, use a soft bristle brush or vacuum cleaner to clean the condenser fins of dirt, dust etc. Take care not to damage the fins during cleaning.

4. INSTALLATION

Installation to be carried out by a suitably trained person only. Compliance with local Bylaws and Codes of Practice must be ensured.

To ensure trouble free operation it is essential that the EVO cooler is installed correctly and sanitised prior to use.

1. The EVO cooler should be sited on a firm level surface, in a well ventilated position, and at a maximum distance of 2 metres from an electrical supply. To ensure efficient and reliable operation of the refrigeration system allow 75mm clearance around the unit and that there is un-impeded flow of air to and from the condenser grilles. Allow for future access to the lid and service panels.
2. If not already fitted, fit the appropriate electrical plug to the service cord consulting local Electrical legislation for correct method of Installation.

   WARNING – THIS APPLIANCE MUST BE EARTHED.

   Do not connect the cooler at this point.
3. Remove the lid inspection panel and fill the water bath with cool, clean water until the water flows from the overflow. Do not use de-ionised water or add any substance to the water. Do not leave hose pipes unattended whilst filling the water bath – the overflow will not remove water quickly enough to prevent water from spilling onto electrical components. Once filled with water do not move the EVO cooler.
4. Block the outlet on the water recirculation pump.
5. Ensure that all covers and access panels are screwed in place.
6. Ensure that the EVO cooler is electrically safe. The EVO cooler may now be electrically switched on to allow it to cool down whilst the rest of the Installation is completed. The EVO cooler will displace water through the overflow as it forms its ice.
7. Electrically isolate the EVO cooler. Connect the beer inlet and outlet lines and python recirculating lines – check each joint before completing the insulation. The python insulation should be carefully finished to ensure that all cold surfaces are fully insulated and to prevent air from entering beneath the insulated surface.

   Note: The dispense performance is dependant on well constructed and well insulated pythons.
8. Sanitise the EVO cooler – see User Instructions.
9. Electrically switch the EVO cooler on.
10. The system is now ready for operation but will not give best results until the ice bank is fully formed and the python temperatures are stabilised.

5. MAINTENANCE

Maintenance is to be carried out by a suitably trained person only. Compliance with local Bylaws and Codes of Practice must be ensured.

The EVO cooler requires occasional checking and cleaning as follows:

1. Check that the water level in the tank is up to the overflow. Remove the inspection cover and observe the water level.
2. Check that the airflow to the EVO cooler is un-impeded and clean the condenser fins. To clean the fins – electrically isolate the EVO cooler, use a soft bristle brush or vacuum cleaner to clean the condenser fins of dirt, dust etc. Take care not to damage the fins during cleaning.
3. Check the condition of the python insulation and that the pump is circulating water.
4. At regular intervals, to be determined by the user and/ or owner of the EVO cooler, check for electrical safety. If any maintenance/servicing is required, refer to the fault finding chart, wiring diagram and exploded drawings contained in this manual and always ensure that the following are observed-
5. When replacing components always use IMI Cornelius approved spare parts. Failure to do so will invalidate the EVO cooler approvals. (see section 6 for method of component replacement.)
6. Always electrically isolate the EVO cooler before removing covers or carrying out any work.
7. After working on the EVO cooler ensure that the unit is left electrically safe and that all covers and cover fixings are refitted.
8. If replacing a condenser fan motor always fit a new fan blade where practical.
9. If removing the recirculation pump do not invert the assembly as water will run into the motor. Do not knock or jar the assembly as this may damage the bearings.
10. The drier must be replaced each time the refrigeration system is opened.
11. Always replace the seals, screws, cover etc. after servicing the EVO cooler.

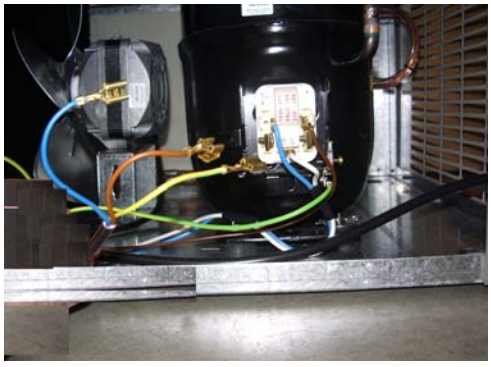
6. COMPONENT REPLACEMENT

6.1 FAN MOTOR

- Isolate the EVO from the mains supply.

Remove two screws to release the service hatch.

Secure service hatch under the handle.



Remove the fan motor wires from the compressor.

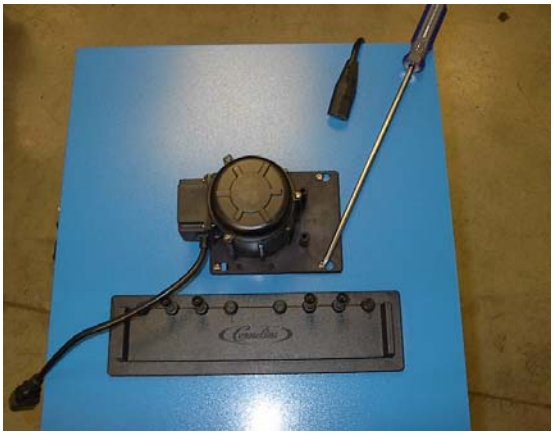
Remove the fan bracket screw.

Remove the fan assembly.

6.2 RECIRCULATION PUMP

- Isolate the EVO from the mains supply.
- Isolate python flow and return lines.

Remove the bulgin plug from the socket.



Release the screws (do not remove) on the pump mounting plate.

Slide pump across and lift up and out.

6.3 ICE BANK THERMOSTAT

- Isolate the unit from the mains supply.

Remove the two screws to release the service hatch.

Secure the service hatch under the handle.

Remove the two screws which hold the thermostat.

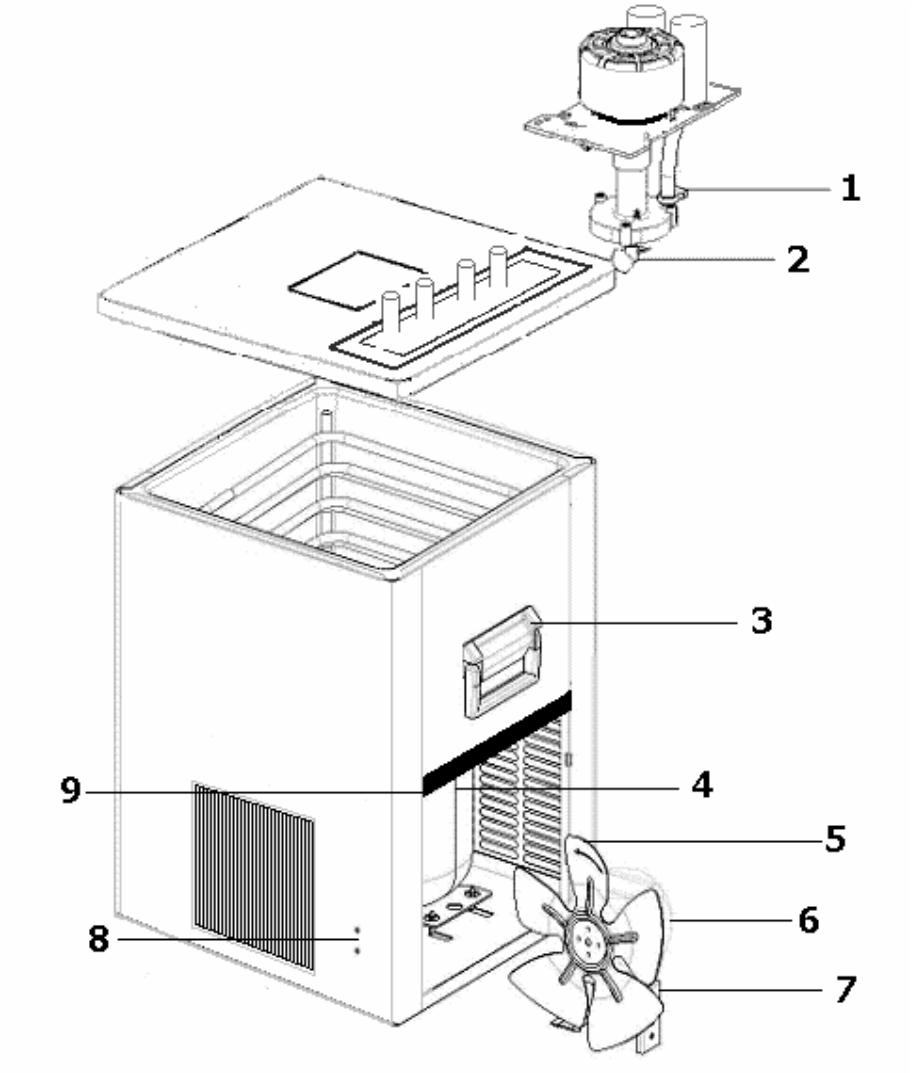
Remove the wiring to the thermostat.

Pull phial up through the spacer and downwards through the groove in the tank, note the phial position and ensure the replacement fits the same.

7. EVO SPARES LIST

ITEM	PART No. EVO 30	PART No. EVO 50	PART No. EVO 70	PART No. EVO 100	DESCRIPTION
1	44 0000 112	44 0000 112	44 0000 112	44 0000 112	PUMP ASSEMBLY Med-Flow
1	TBA	TBA	TBA	TBA	PUMP ASSEMBLY Lo-Flow
1	NA	NA	TBA	TBA	PUMP ASSEMBLY Hi-Flow
2	14 3350 000	14 3350 000	14 3350 000	14 3350 000	PROPELLOR – Med-Flow PUMP
2	TBA	TBA	TBA	TBA	PROPELLOR – Lo-Flow PUMP
2	NA	NA	TBA	TBA	PROPELLOR – Hi-Flow PUMP
3	06 0 105113	06 0 105113	06 0 105113	06 0 105113	HANDLE
4	44 0000 273	44 0000 222	44 0000 206	44 0000 279	COMPRESSOR SET
	8526016	TBA	103N001	103N002	COMPRESSOR PTC – START DEVICE
	8530343	NA	NA	NA	COMPRESSOR THERMAL OVERLOAD
5	58 0431 015	58 0431 015	58 0431 015	58 0431 015	FAN BLADE
6	44 0000 001	44 0000 001	44 0000 001	44 0000 001	FAN MOTOR
7	06 0 131111	06 0 131111	06 0 131111	06 0 131111	FAN MOTOR MOUNTING BRACKET
8	58 1174 007	58 1174 007	58 1174 007	58 1174 007	ICE BANK THERMOSTAT
9	06 0 195206	06 0 195206	06 0 195405	06 0 195405	SERVICE HATCH HINGE
N/S	06 0 195303	06 0 195303	06 0 195303	06 0 195303	SERVICE HATCH
N/S	06 0 198100	06 0 198200	06 0 198301	06 0 198400	EVO LOGO
N/S	06 0 190206	06 0 190206	06 0 190206	06 0 190206	MAINS LEAD

8. EVO RANGE EXPLODED VIEW



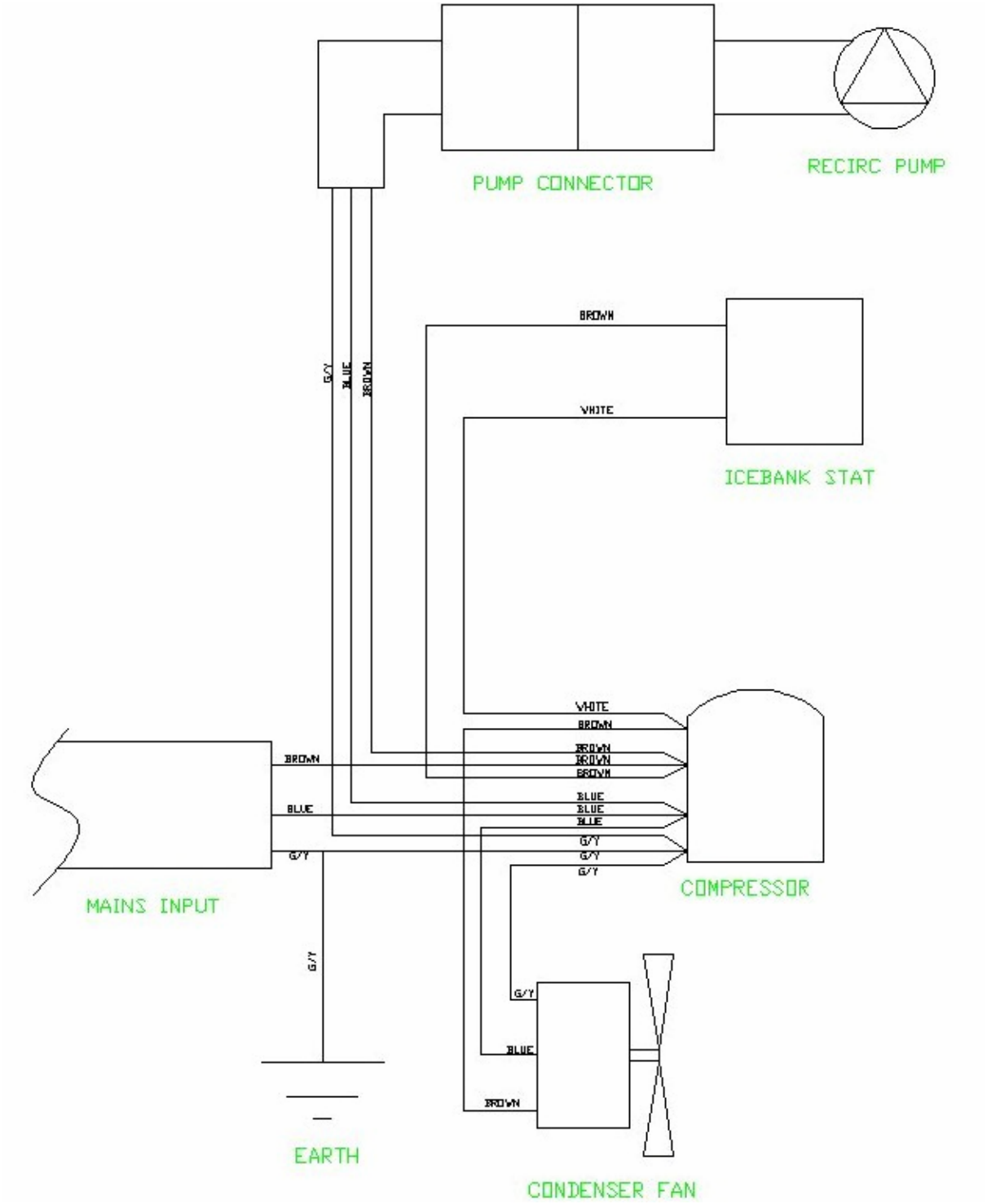
9. FAULT FINDING

Problem	Possible Fault	Possible Cause	Action
Beer frozen in coil	Ice bank too large	Faulty ice bank control Poorly positioned ice sensor	Replace Reposition
Beer warm	Reduced ice weight or long time to form ice	Faulty ice bank control Fuse blown No electrical supply	Replace Check and replace Check
		Refrigeration system failure	Replace base unit
		Poor condenser cooling	Check clearance around cooler and Fan motor operation. Check Condenser and clean if necessary
	No water recirculation	Pump not connected Pump failed Pump or python blocked	Connect pump Replace pump Check for kinks in pipes. Clear out Debris from lines
		Insufficient water in tank	Top up water level
	Beer too warm into Cooler	Keg badly positioned Condenser airflow warming keg	Reposition keg Reposition keg
	Poor agitation of water onto coils	Motor failure	Replace motor/pump
		Pump impeller failed Excessive algae growth in bath	Replace Clean bath and coil outer surface
	Poor system installation	Poor python insulation	Re-insulate
		Poor python routing – heat pick-up	Re-route
		Poor airflow to condenser	Re-site cooler

Note: Refrigeration system failure could be – Start device for compressor failed, over temperature device in compressor tripped, open circuit on compressor motor windings, refrigerant gas leak, capillary tube blockage etc.

These faults are best diagnosed and repaired off site in a workshop environment.

10. WIRING DIAGRAM



IMI CORNELIUS INC.
One Cornelius Place
Highway 10 West
Anoka, Minnesota 55303-6234
U.S.A.
Tel: (612) 421 6120
Fax: (612) 422 3255

IMI CORNELIUS INC.
3170 Orlando Drive, Unit 3
Mississauga, Ontario L4V 1R5
Canada
Tel: (905) 673 6653
Fax: (905) 673 2830

IMI CORNELIUS
AUSTRALIA PTY. LTD.
144 Milperra Road
Revesby
NSW 2212, Australia
Tel: (61) 2 9774 4533
Fax: (61) 2 9774 5825

IMI CORNELIUS
NEW ZEALAND LTD.
20 Lansford Crescent
P.O. Box 19 044
Avondale, Auckland 7
New Zealand
Tel: (64) 9 820 0357
Fax: (64) 9 820 0361

IMI CORNELIUS
(SINGAPORE) PTE LTD.
16 Tuas Street
Singapore 638453, Singapore
Tel: (65) 862 5542
Fax: (65) 862 5604

IMI CORNELIUS
PACIFIC LTD.
15th Floor, Hale Weal Industrial Bldg.
22-28 Tai Chung Road
Tsuen Wan, N.T.
Hong Kong
Tel: (852) 2789 9882
Fax: (852) 2391 6222

IMI CORNELIUS
ESPANA S.A.
Poligono Industrial, Riera del Fonollar
Sant Boi de Llobregat
E-08830 Barcelona, Spain
Tel: (34) 93 640 2839
Fax: (34) 93 654 3379

IMI CORNELIUS
UKRAINE
B.Khmelnitsky Str. 12A
Office 40
Kharkov 61050 Ukraine
Tel: +380 57 2 587773

IMI CORNELIUS
UK LTD
Tything Road
Alcester
Warwickshire B49 6EU
Tel: (44) 1789 763 101
Fax: (44) 1789 763 644

IMI CORNELIUS
BENELUX N.V.
Boskapellei 122
B-2930 Brasschaat, Belgium
Tel: (32) 3 660 1020
Fax: (32) 3 660 1045

IMI CORNELIUS
DEUTSCHLAND GmbH
Carl Leverkus Strasse 15
D-40764 Langenfeld, Germany
Tel: (49) 2173 7930
Fax: (49) 2173 77 438

IMI CORNELIUS
FRANCE
35/37 Avenue du Gros Chene
F-95220 Herblay, France
Tel: (33) 1 3440 1580
Fax: (33) 1 3440 1581

IMI CORNELIUS
OSTERREICH Ges.m.b.H
am Langen Felde 32
A-1222 Vienna, Austria
Tel: (43) 1 203 35200
Fax: (43) 1 204 4474

IMI CORNELIUS
HELLAS S.A.
55 Theomitoros
Allmos 174 55
Athens, Greece
Tel: (30) 1 985 3800
Fax: (30) 1 985 3801

IMI CORNELIUS
ITALIA SRL
Via Belvedere 26
I-20043 Arcore, Italy
Tel: (39) 039 627 081
Fax: (39) 039 601 3884

IMI CORNELIUS
BRAZIL LTDA.
Rua Itaocara, 97 - CEP 21381-230
Rio de Janiero, RJ – Brazil
Tel: 55-21-596-9595
Fax: 55-21-593-1759

IMI

Cornelius.